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Atkinson, Paul

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“ISN’T IT TIME YOU WERE FINISHING?”: WOMEN’S LABOR FORCE PARTICIPATION  
AND CHILDBEARING IN ENGLAND, 1860–1920

*Paul Atkinson*

ABSTRACT

This contribution examines the relationship between women’s labor force participation (LFP) and fertility in three industrial towns of nineteenth- and early twentieth-century England from a feminist economic perspective. The study augments existing, statistical, approaches to demographic history by discussing women’s motivations. Women’s LFP influenced their likelihood of family limitation (via effects on both age at marriage and marital fertility). Where women were most likely to be in paid work, they were most likely to limit family size. It is further argued that the diversity of LFP patterns is the principal explanation for the varied patterns of fertility decline in different parts of Britain.

KEYWORDS

History, fertility, nineteenth century, England, women, employment

JEL Codes: B54, I30, J13

## INTRODUCTION

During a 1984 interview with oral historian Rob Perks, Nellie Whiteley, a midwife, clearly recalled the relationship between women's paid work and their fertility in England in the 1930s (Bradford Heritage Recording Unit (BHRU; 1984: record A0067, 65–6). According to her testimony, male mill overseers in Bradford, in England's leading woolen textile manufacturing district, would notice a woman's advanced stage of pregnancy and comment "Isn't it time you were finishing?" Whiteley and other witnesses made three points, all of them reflecting the particular historical conditions of textile mills in the United Kingdom: first, women regularly continued in paid, full-time mill work after marriage (in contrast to some other occupations); second, they might remain at this strenuous activity, standing for more than eight hours a day doing work of high intensity, until the very last days of pregnancy; and third, they could return to paid work within a few weeks of giving birth (BHRU 1984: records A0032, 12; A0117, 26). While these witnesses recalled employment in the years after 1918, when legislation placed some restrictions on employment in late pregnancy, their account of employment customs in the two previous generations is borne out by quantitative analysis including the study of nominal census data (Carol Dyhouse 1978; Eilidh Garrett and Alice Reid 1994; Eilidh Garrett 1998; Paul Atkinson 2010).

This study examines the labor market experience and fertility of three groups of women using census data on the entire populations of three large towns in England. The first was Bradford, a town specializing in woolen worsted manufacturing. By 1861, Bradford had become the largest center of the British woolen industry, with over 100,000 inhabitants. By

the late nineteenth century, most textile employment was in large mills, which often confined themselves to a single stage of the production process. Leeds, the second site, was a mixed industrial and commercial town. Twice the size of Bradford, it served as a commercial and financial center for a large region, fostering the most varied labor market of the three locations. While men in Leeds were extensively occupied in engineering, women were mostly employed in textile mills at the beginning of the period and in tailoring by the end. Technological innovation during the period transformed tailoring from a mainly workshop and homework trade to an industry where most, but not all, employment and production were in large factories. Middlesbrough, the third town, presented a great contrast. It had grown up rapidly since 1840 to smelt iron from local and imported ore, and developed the production of metal products such as rails, wire, and bridges. Shipbuilding developed an important place by 1900. Compared to the other towns, Middlesbrough had a male-dominated culture and women's labor force participation (LFP) rate was lower than elsewhere. Domestic service was the largest occupation for women.

## RESEARCH METHODS

This study combines the materialist, quantitative approach familiar to economists with a historicist one, which examines the significance of past events and institutions to the actors involved. There is a clear parallel between such historicism and the focus of women's history on recovering women's otherwise hidden historical experiences (Joan Wallach Scott 1983). Such an excursion into the qualitative realm is not an optional extra that adds some "local color" to social science history. The late Robert Woods, a leading practitioner of materialist

demography, argued that scholars of the fertility decline must “think beyond the bounds set by disciplines, back into the minds of their ... ancestors” (1996: 342). As A. W. Carus and Sheilagh Ogilvie argued, there are great rewards for those who overcome the unnecessary disciplinary separation between “holistic immersion in qualitative data” and the use of statistical methods in the study of the nineteenth-century demographic transitions as in many other fields (2009: 921–2). Combining historicism and materialism should make each improve the contribution of the other (Jane Humphries 2010).

Such a synthesis can be found in the work of David Levine (1987), Barry Reay (1996), Garrett (1998), and in important recent collaborative works (Eilidh Garrett, Alice Reid, Kevin Schürer, and Simon Szreter 2001; Simon Szreter and Kate Fisher 2010). This literature adopts a “perceived relative costs of childrearing” approach to the fertility decline, and argues that as family limitation became widespread in Britain during the last quarter of the nineteenth century, more couples of all classes adopted it as a means of meeting rising expectations about the quality of life. Historians of this view are skeptical about overarching explanations for the UK fertility decline and stress that it took many different forms influenced by local attitudes and institutions (Simon Szreter 1996). The present study takes this approach as its starting point, stressing women’s LFP was only one such factor in the UK.

To address the tendency of materialism to leave out important cultural determinants of fertility decisions, qualitative evidence was obtained from cheap local newspapers with a substantial working-class readership (published 1860-1920), and from Bradford and Middlesbrough oral history collections. Historians have not previously used this evidence in research into the fertility decline. Materials in the Burnett Archive of Working-Class Autobiographies at Brunel University were also utilized in this research.

The interpretation suggested by the primary sources was then tested against quantitative evidence from the registration of births, census reports, parliamentary papers, and the census enumerators' books (CEBs; the source documents for census reports which record the answers to each census question, one individual at a time in address order). The CEBs for the 1881 census in these towns comprised entries describing 460,000 individuals using 72 variables. Digitized 1881 CEB data for all of Great Britain are available from the UK Data Archive thanks to the University of Essex Historical Censuses and Social Surveys Research Group under Kevin Schürer and Matthew Woollard (2002). A detailed account of the data analysis has been provided in the dissertation reporting the original research (Atkinson 2010).<sup>1</sup>

Where the conceptual tools of the contemporary documents were insufficient for the analysis required, empirical, well-specified modern concepts were imported--for example the Laslett–Hammel household classification (E. A. Hammel and Peter Laslett 1974), child-to-woman ratios (Andrew Hinde 1998), and the singulate mean age at marriage (John Hajnal 1953). This approach reconciles as far as possible the advantages of the historicists' faithful reconstruction of past mental worlds with the mathematical rigor of materialism while avoiding the reductionism of either (Carus and Ogilvie 2009). This dialectic between materialist and historicist enquiry was pursued through several iterations of research.

## THE QUANTITATIVE DATA

The town is an appropriate level of aggregation for considering relationships between fertility and women's LFP. In addition to offering large populations in which statistically significant variations are observed more easily, there is evidence from the nineteenth century that,

especially where employment in one industry dominated the local culture, place was more important than occupation as a determinant of fertility rates (Garrett et al. 2001). In such towns, one set of views about family life might achieve dominance in local institutions and discourses. This predominance was a characteristic of Bradford and Middlesbrough, though less so of Leeds. It is suggested that there was a Bradford-specific culture, with its own unique fertility behavior and women's LFP patterns, and also a Middlesbrough one. Leeds, a larger, more diverse town, had several variant cultures shaping the fertility patterns of subpopulations, such as the predominantly male engineering factory workers of south Leeds, the middle classes of the comfortable northern suburbs and, after 1890, the Jewish refugee tailoring workers. Gender, class, and ethnicity shaped these identities, which then mingled within the larger identity of Leeds (Derek Fraser 1980).

The principal data source for women's LFP is the census, both its published reports (Census of England and Wales 1861, 1871, 1881, 1891, 1921; Census Returns of England and Wales 1901, 1911) and the raw data in CEBs (Schürer and Woollard 2002). Material on women's LFP from the census reports is presented in Table 1, which suggests that women's LFP was always highest in Bradford, at levels of 40 percent or more, and lowest in Middlesbrough at half of these rates or less. Women's LFP in Leeds was closer to that in Bradford. Trends over time were obscure, but, as discussed later, it is possible that women's LFP declined somewhat .

*Table one here.*

Reliance on the census has well-documented problems, the greatest of which is that its treatment of women's LFP was both inconsistent and obscure during the period studied. Whether a woman was enumerated as economically active or inactive depended on changing,

socially constructed norms of gender roles held by the women themselves, husbands speaking for the household, enumerators, and census office staff (Ellen Jordan 1988; Bridget Hill 1993; Sara Horrell and Jane Humphries 1995; Michael Anderson 1999; Edward Higgs 2004; Eilidh Garrett 2007).

Clearly the figures for women's LFP in this study are lower bounds: true economic activity was considerably greater. As well as full-time waged occupations, which stood a reasonable chance of being reported, women participated in the labor market in myriad other ways, from taking in lodgers to sewing, washing, and mending or petty trading from the front room (John Benson 1983; Carl Chinn 1988; Garrett and Reid 1994). It should be noted that these home-based employments, being more compatible with childrearing, promoted higher fertility and were more prevalent in towns like Middlesbrough where entry into the full-time labor market was the most difficult for women.

The figures here vary in reliability from decade to decade. In 1881 and 1891, enumerators were told to place married women in the "unoccupied" category, though in fact they tended not to do so when a woman had a full-time waged occupation (Hill 1993). These are likely to be the least reliable censuses, with the most severe under-recording. The unwary reader of census reports may also stumble over the incompatible presentation from one decade to another, with occupations reported for those over 20 years of age in 1861 and 1871, undifferentiated by age in 1881, for those over 10 years of age in 1891, and thereafter with gradually improving (and more consistent) age breakdown. Data are reported on the occupations of married women only from 1901.

There is no clear trend in census undercounting for this period. While women's employment became gradually more visible to the middle-class men who organized the census, as women's employment drifted slowly from factory to office from the 1880s, probably reducing undercounting, a counter-trend also operated in which the growing social



construction of “work” as an activity carried on away from the home for wages gradually made it less likely that women would report their many forms of less formal labor to enumerators (Garrett 2007). As a result, the mild downward trend revealed in Table 1 may be entirely artifact.

Nor are census data wholly consistent between towns. Despite the growth of detailed central instructions to enumerators, their approaches to definition were affected by local cultures (Dennis Mills and Kevin Schürer 1996; Edward Higgs 2004). It is likely that the women who worked in Bradford mills were well-enumerated, while those who worked in Leeds’ diverse tailoring trade were captured to varying degrees depending on the nature of their workplaces, from the well-recorded factory workers to the employees of backstreet workshops and home workers, who may often have gone unrecorded. The informal, unrecorded, economic activity of Middlesbrough women, who look very inactive in Table 1, has already been noted.

Census reports nevertheless disclose usable information about women’s LFP, provided it is treated with caution. Contemporary reports confirm that women’s LFP was very high in Bradford (in fact near the top of the national range of town values), very low in Middlesbrough (at the bottom of the national range), and at an intermediate level in Leeds (T. H. C. Stevenson 1923). As for trends over time, conclusions are harder to draw from the census, but the most plausible view is that there was some growth in white-collar employment, which remained small in relation to women’s total labor force. No clear trend in working-class women’s LFP emerges in this period.

The fact of participation in market labor or otherwise is not the only census evidence available. While it has its own problems of interpretation, the breakdown into different occupational groups also sheds important light on relationships between women’s LFP and fertility.

*Table two here*

Table 2 illustrates the diversity of the three town labor markets, recalling the importance of the particular, as opposed to the overarching narrative, in explaining the fertility decline. The prominence of the textile sector distinguishes Bradford, where it exceeded half of all recorded women's LFP, from the two other towns: Leeds had the most mixed economy, with a growing share of women's employment in garment production, reaching a third of women's LFP in 1911. In Middlesbrough, the women's labor force, much smaller than Bradford's and Leeds', was steered toward service sectors of different forms, including food and lodging and the home (or workshop) garment industry as well as domestic service, these occupations together taking the great bulk of all women's LFP throughout the period. There was no one model of women's LFP, or one model of northern English urban working class women's LFP: even women's mill work was not homogeneous, in either its form or its effects on family life.

Moving on to fertility, the most informative measures relate numbers of births to numbers of women "at risk" of conceiving, avoiding the confounding effects of geographical and temporal variation in the age and sex structure of the populations (Hinde 1998). One recommended approach to this measurement in historical periods, when data such as records of maternal ages may be incomplete or absent, is the use of child-to-woman ratios. This proxy measure reports the ratio of children under age 5 to women of fertile age, defined as between the ages of 15 and 44. Table 3 presents child-to-woman ratios for the three towns between 1861 and 1911.

*Table three here*

The data show relatively high ratios, around one young child for every two fertile women, in Bradford and Leeds in 1861–81. This ratio then declined by 1911, with particular rapidity in Bradford where the ratio was only 1:3. In Leeds it declined less rapidly. In Middlesbrough, for which data were not reported until 1881, ratios were higher at all dates than even Leeds and Bradford's highest, though here too there was a decline, from 3:4 in 1881 to 1:2 in 1911.

The child-to-woman ratio is not a perfect proxy for fertility, but it is sufficient. Because it is based on an individual's presence on census night, it is distorted by infant and child mortality (it does not count children who died before the census is taken), and by migration which separated children under age 5 and their mothers to different towns. Attempting to estimate fertility more precisely involves the researcher in making estimates of these two factors, which would still ultimately rest on assumptions (individual birth and death registration data remains confidential in Britain, even for historic periods). The historical evidence does not suggest there was momentous variation between 1861 and 1911 in either infant mortality (this came in the following decade) or child migration: nor were there large differences in these variables between the three towns at this time. By considering women of fertile age only, the child-to-woman ratio allows for the effects of skewed age and sex distribution, an important factor discussed below, but it does not take account of age at marriage.

Child-to-woman ratios are therefore useful for the present purpose since they describe how many children a woman was likely to have as a result of the changing average age at marriage and marital fertility. (It is not being suggested that they measure her absolute probability of having a child, after controlling for all socioeconomic variables. In some ways this is less interesting for the present purpose.) They show similar levels in Bradford and

Leeds at the start of the period, but nearly 50 percent higher in Middlesbrough. Decline began first in Bradford, within a decade of 1871, and became steep and sustained. Major fertility decline was also experienced in the other towns, but was less rapid, so by 1911 fertility was 20 percent higher in Leeds than Bradford and 90 percent higher in Middlesbrough.

It is useful to examine age at first marriage, as well as fertility ( $A_{ma}$ ), since demographers usually suggest that in the northwest Europe of earlier centuries this (and its closely related variable, proportion never marrying) was the main mechanism for limiting a woman's lifetime or "total period" fertility rate (TPFR). Then, the argument runs, from around 1875 the limitation of fertility during marriage began to dominate (Roger Schofield 1985).

Variations in  $A_{ma}$  were examined by estimating what John Hajnal termed the 'Singulate' Mean Age at Marriage (SMAM) from census data on the ages of married women (1953; Hinde 1998–). This evidence is incomplete in census reports, which begin reporting it only from 1901, but a calculation was made from CEBs for 1881. Table 4 shows that the age at marriage was around 25 in Bradford and Leeds, but only 23 or so in Middlesbrough, and that it was gently rising.

*Table four here*

The table shows that mean age at marriage was, and remained, an important source of difference in fertility between Middlesbrough and the two other towns, in which marriage occurred about two years earlier for women, on average. The trend over time, for an increase in mean age at marriage of about a year between 1881 and 1921, made a notable contribution to falling fertility. Contrary to any crude interpretation of the role of marriage, the impact of  $A_{ma}$  on TPFR did not wither away: on the contrary it retained a large influence on the

variation in TPFMR between these towns. This was because the different economic and cultural character of each town, via local labor markets and women's LFP, produced different sex structures through inward and outward migration. For every 100 women aged 15 to 45 in 1871, the stock of men of matched age was eighty-five in Bradford, ninety-four in Leeds, and 142 in Middlesbrough (Census of England and Wales 1871: 458, 490). Age structure was also strongly affected.

The role of women's LFP in this was central. In Bradford, the mills demanded girls in great numbers. In 1861, before compulsory education, the labor force in worsted manufacture comprised of 5,100 women under 20 years old, 7,800 older women, 2,000 men under 20 years old, and 3,600 older men. Even the introduction of compulsory education (affecting girls and boys equally, in law if not in fact), did not abolish this bias toward employment for young women. The gendered demand for labor drew an excess of women over men to Bradford, particularly at the ages of about 14 to 30, covering the life stages of courtship, marriage, and peak fertility for women, so that many remained unmarried for lack of available potential husbands.

This structural depression in Bradford's marriage rate was exacerbated by cultural norms, only partly born of economic necessity, which obliged young women to postpone marriage during their early employment years for even longer than their counterparts in the cotton mills of neighboring Lancashire. As Simon Szreter and Anne Hardy (2000) note, just why this culture of abstinence was stronger in Yorkshire than Lancashire remains somewhat mysterious. Differences in towns' religious heritages could, speculatively, have played some role. The pattern of women's LFP resulting from Bradford's economic and cultural history thus brought together a population in which women aged 10 to 20 were overrepresented and a culture that delayed marriage to around age 26. The result was very low fertility.

Women's LFP also influenced  $A_{ma}$  in the other two towns. In Leeds, women's LFP was also relatively high, though it did not approach Bradford levels (Table 1), and marriage was delayed nearly as long as in Bradford. Young women found employment in woolen and flax mills in the earlier part of the period and then in growing numbers in tailoring. The gendered nature of women's employment in Leeds tailoring has been described by Katrina Honeyman (1997), but its relationship with family formation and fertility deserves further research. It appears that while engaging in paid work at home was an option for the financially hard-pressed young mother, who could combine it with childcare, the expanding factories and workshops preferred to employ young, unmarried women.

Middlesbrough provides an instructive contrast. As Szreter and Hardy (2000) argue for high-fertility towns in this period, women would often have to migrate to find employment, leaving marriage and childrearing as the main role open to those who stayed. The outward migration of women and the inward migration of men helped produce Middlesbrough's particularly low  $A_{ma}$ . A particularly clear example of these occupational pressures to migrate is offered in the oral history sources by one family who moved from Bradford to Middlesbrough for the father's occupation, but then sent daughters back to Bradford to work in the mills as they could find no acceptable paid employment locally (Teesside Archives 1983: record 114).

$A_{ma}$ , driven in this way by women's LFP was, then, a lasting source of fertility difference between these towns. It does not, however, explain the entire difference. After standardizing town populations for  $A_{ma}$ , the average woman born in Bradford between 1871 and 1880 had experienced 3.66 births by 1911, compared with 4.28 in Leeds and 4.94 in Middlesbrough (Szreter and Hardy 2000). These figures are calculated on the whole population in the age range, including those who remained celibate. The statistical justification and methods for standardization are described by Hinde (1998).

## PERCEIVED RELATIVE COSTS OF CHILDREARING AND EMPLOYED MOTHERS' CHOICES, BY TOWN

The differences in women's LFP rates between the three towns identified in the previous section are central to understanding their varying fertility characteristics. There are two features of the relation between women's LFP and fertility which call for explanation: geographical variation, discussed here, and variation over time, discussed in the next section. Here, the concept of the perceived relative costs of childrearing will be applied to the perceived costs (and benefits) of women working in the labor market to examine how varying patterns of women's LFP affected fertility in different places.

The concept of "perceived relative costs of childrearing," based in a historicist understanding of contemporary perceptions, is an effective way of thinking about these relationships (John R. Gillis, Louise A. Tilly, and David Levine 1992; Szreter 1996). Accepting the historical evidence that individuals could and sometimes did control their own fertility, it makes sense to suppose they were influenced by their perceptions about the costs and benefits (in the widest sense) of childrearing. It is not necessary to assume that most couples thought in this way, if it is accepted that the number doing so was sufficient to produce the observed changes in aggregate fertility. Contemporary documents such as autobiographies encourage the view that family limitation was no longer rare (Jane Humphries 2007).

Thinking about the perceived relative costs of childrearing helps explore the motivation of both men and women. The secondary literature emphasizes the decisions of women as historically central to declining fertility (Wally Seccombe 1990). Although fathers'

motivation to have smaller families may have been underestimated (Atkinson 2010), it remains reasonable to focus on the motives of mothers, who had perceptions about combining employment with motherhood whether or not they had yet tried this.

Standard microeconomic models of the household, which often derive from the much-cited work of Gary S. Becker (1965), propose a negative correlation between fertility and women's LFP (Joost de Laat and Almudena Sevilla-Sanz 2011). Becker (1965) theorized that the division of labor within the household would allocate most time to market labor from those who could perform it most productively since this maximized money income and market consumption. Jan de Vries (2008) built on this model with the concept that the productivity of domestic labor was also relevant to household welfare because it was needed to transform market consumption into "final commodities" such as health or a comfortable room. Households attempted to maximize household welfare in their decisions to allocate the time of household members to market labor or domestic labor (or human capital formation or leisure). In making this point, de Vries "mainstreamed" the feminist arguments on domestic labor of, for example, Paddy Quick (1972), Janice F. Madden (1972), Ann Oakley (1974), Terry Fee (1976), and Nancy Folbre (1991).

De Vries (2008) saw that, by the mid-nineteenth century, this gendered specialization of labor roles produced the "breadwinner-homemaker household". But despite his interest in the welfare of women in the household, de Vries has had little to say about the issue of family size. His analysis still partly suffers from the neglect of potentially conflicting interests within the household, a more general problem of this type of economics, identified by Lourdes Benería (1995). Elissa Braunstein and Nancy Folbre (2001), too, have noted the flaws in Becker's assumption of altruism within the family.

Looking at women's LFP from this "perceived costs of childrearing" perspective leads to the conclusion that such costs included the need to allocate time to market labor,



which would produce income to buy more goods for the household, and also to allocate time to domestic labor, to transform the purchased goods into greater welfare for the household. Although mothers were still able to participate in the labor market, factory labor was less favorable to this than home production, as childcare posed more difficult problems. The nineteenth-century rise of the factory, and geographical differences in its distribution, were therefore relevant to fertility. It was not impossible to arrange childcare, but it was undeniably a cost, whether financial, emotional, or both. So while going out to work and having a family were not mutually exclusive, the perceived extra costs of childrearing for the woman working in the labor market encouraged her to limit the size of her family (both by starting it later and by having fewer children altogether).

One convincing element of de Vries' (2008) account of late nineteenth-century Europe is his argument that while there was an ever-wider range of goods available, most market goods needed considerable labor to transform them into family welfare – some foods required lengthy preparation, and washing was done by hand, for example. Rising perceptions about the quality of life appropriate to a working-class family introduced a dynamism into these pressures on mothers working in the labor market. Pressures grew to increase both her market and domestic labor. Once bedrooms were expected to contain a carpet or rug, she needed to work for extra money to buy them, but they also had to be taken out of doors and beaten for weekly cleaning. Once families expected more meat in their starch-dominated diets, this too had to be bought, but then also prepared and cooked. Meat dishes, including the economical ones recommended to the working class such as sheep's heads, took more labor to prepare than the sparser diets of the 1840s generation (Chinn 1988). This view of growing pressures on women to spend time on domestic labor is strengthened by Joel Mokyr's (2000) argument that in the late nineteenth and early twentieth century, the British working class quickly adopted new scientific knowledge about health and

disease . New ideas about cleanliness meant “more [paid and unpaid] work for mother” (Mokyr 2000: 1).

Mothers working in the labor market, then, had to reconcile market and domestic labor as family size made growing demands on both. In aggregate, it seems they did so based on a household income threshold: once household income reached about twenty or thirty shillings per week, they were more likely to focus on domestic labor, providing support for Becker’s (1965) hypothesis (Joanna Bourke 1994). The search for motivation, however, needs to go beyond these aggregates. Three ways of managing the pressures on a mother working in the labor market can be distinguished, each perhaps appealing to different mothers.

One option for a mother working in the labor market was to prioritize domestic labor, sacrificing income; this was easier (according to the hypothesis) in higher-income families. A second was to prioritize income, sacrificing the comfort that required domestic labor to produce. Socially encoded meanings of women’s employment, gender roles within the home, and of different forms of consumption were integral to these choices. For example, standards of respectability usually penalized this second course. These were, then, harsh choices. A third option, which escaped some of the difficulty, was to alter the previously fixed parameter of completed family size. At any given combination of market and domestic labor, more welfare could be provided for each child (indeed, each family member) in a smaller family than in a larger one. This argument sometimes presented itself, to mothers of the 1860s and after, as a contrast between the conditions which they had experienced growing up in large families and the possibilities available in smaller ones (Humphries 2007).

In the first option, prioritizing domestic labor resulted in fertility determining women’s LFP: as family size increased, women’s LFP diminished, the mother working in the labor market treating it as the dependent variable which had to be reduced to bring her

allocation of time into balance. The historiography of fertility determining women's LFP in this way is extensive. Tine De Moor and Jan Luiten van Zanden (2010) recently argued that the late medieval and early modern northwest European marriage pattern made women's LFP much easier there than in other regions. Simon Szreter and Eilidh Garrett (2000) argue that even within marriage, the use of family limitation long before the fertility decline was making it easier for some women to do paid work. Many of the oral history witnesses used by Atkinson (2010) reported that their mothers were out of the labor market in the 1890s and 1900s because they had so many children to look after. A typical comment was that a mother of eleven "had enough on with just the family" (BHRU 1984: record A0129). One special group illustrates the possibility of lower family size boosting women's LFP: mothers who lost a child. Garrett (1998) has shown, for the mill town of Keighley, about 10 kilometers from Bradford, that where a young child had died, the mother was more likely to resume employment. This link from fertility to women's LFP was a given in the cultures of household life already described. It was certainly to be found in all three towns; what it does not explain is the geographical differences in women's LFP or fertility.

In the mother's second perceived option--to stay at paid work, have further children but not match rising family size with increases in domestic labor--the connection between fertility and women's LFP is broken. The quantitative evidence suggests it was not a frequent choice. Census reports do not distinguish between even the employment of married and unmarried women until 1901, let alone between mothers and childless women, but the post-1901 data on married women show them playing a much smaller role in the labor market than the unmarried, as all accounts of women's employment in this period agree.

This is an example of the value of the qualitative sources, shedding light on the motives at work here. Failing to keep up with rising standards of child welfare was condemned as neglect, and discourses setting out these concerns denigrated the mother

working in the labor market for neglecting her children (Collet 1894; Carol Dyhouse 1989). The infant and child welfare movement responsible for these discourses has been thoroughly described (Deborah Dwork 1987). Its impact on most mothers was achieved not through its often-studied publications but through grassroots activity and its influence on popular journalism. When Leeds' health visitors succeeded in 1914 in visiting 6,757 of the 9,483 notified births in the town, it was the first time that state-sponsored maternity services were in touch with the majority of new mothers there (City of Leeds 1915: 42–3). Examination of the cheap press in Bradford, Leeds, and Middlesbrough between 1860 and 1920 reveals a growing interest in reports about child neglect: the failure to call a doctor to a sick child, suffocation by overlying in bed, recurrent allegations of infant murder in life insurance frauds, and court appearances for allowing children's truancy or for letting children go hawking goods for sale after dark (Atkinson 2010). Pressures came not only from elites, but from peers, as illustrated by the growing willingness to police neighbors' treatment of their children by reporting cruelty to authorities and by gossip comparing the cleanliness of children's clothes and bodies (Melanie Tebbutt 1995). Women contemplating motherhood were unlikely, then, to opt for this way of reconciling its different demands.

The mother's third perceived option was to stay at her paid job, have fewer children, and spend more time looking after each of them. In this scenario women's LFP was determining fertility. Rather than labor force participation, completed family size was now treated as the variable to alter in order to bring pressures on the mother into balance. Oral history and autobiography offer good evidence of mothers of all family sizes who were strongly motivated to earn. Bradford examples included the wife of a "horse man" who "used to go out cleaning for people, or whitewash out their cellars," and the wife of a carter who took in washing from a bar to earn one shilling and threepence for a day's labor, and from a neighbor to earn another ninepence for a half day's labor (BHRU 1984: records A0027,

A0067). These cases suggest the need for paid work: others show how limiting fertility not only made this easier but spread the benefits further. For example, one Bradford woman provided negative evidence by contrasting her own hardship in a large family, where her mother had been forced by childcare demands to give up paid work, with the conditions in smaller families. She said that families could not afford many children “one after the other, I mean, you hadn’t the money. Clothes had to be handed down and patched up” (BHRU 1984: records A0098, 75).

About a third of the households studied had incomes too low for a woman’s withdrawal from the labor force to be realistic, based on Bourke’s suggested threshold of twenty to thirty shillings per week. For this large group, limiting fertility to accommodate labor force participation was attractive. This was more common in mill towns like Bradford than in heavy industry towns like Middlesbrough, since men’s mean wages were lower and women’s wages higher in Bradford, adult women’s wages were a higher proportion of adult males’, and incentives for women’s employment were stronger. The main determinant, then, of different fertility patterns from town to town seems to have been the pattern of women’s LFP. Varying patterns of men’s and women’s wage rates and women’s participation rates influenced the likelihood that women would limit their families : where women engaged in paid work most, they were most likely to limit family size.

#### PERCEIVED RELATIVE COSTS OF CHILDREARING AND EMPLOYED MOTHERS’ CHOICES, OVER TIME

The study of women’s LFP at town level, then, provides important insight into geographical variation in fertility. The relationships between the two variables over time, however, need

not be the same ones. For example, exogenous factors with a greater impact could come into play. This seems to have been the case in Britain between 1860 and 1920, where a secular fertility decline set in, as Table 3 suggests. This is best interpreted as the result of a rise in the perceived costs of childrearing deriving – above all – from higher working-class expectations about how a household ought to be able to live. If families were smaller, they could obtain a higher quality of life, including greater investments of care and time in each child, . While women’s LFP was not the strongest influence on these changes, its contribution is worth considering briefly before concluding.

It is notable that women’s LFP, as measured by the census and reported in Table 1, does not appear to have changed much. For all the anxiety among contemporaries (frequently men) that it was rising, with adverse effects on child welfare, enquiries were inconclusive (Collet 1894). Looking at different occupational groups, women’s employment in education and office work was growing by the 1890s, although, in the towns studied, these sectors remained smaller than the established categories such as domestic service and textiles. This occupational analysis (illustrated in Table 2) shows that not only the total volume, but also the nature, of women’s LFP was fairly steady. The largest change was seen in Leeds, where the mechanization of tailoring boosted its share of the women’s LFP, at the expense of textiles and service. Even this development had a limited impact on fertility behavior, since it substituted one form of full-time employment that discouraged family formation for another.

In terms of the three options for a mother working in the labor market explored here, the change in the relationship between women’s LFP and fertility over this period can be seen as a trend toward the third option: using lower fertility to reconcile LFP with rising expectations . As expectations about quality of life rose, demanding more household income and more domestic labor, mothers typically held out against the calls for a breadwinner–homemaker household, keeping up their employment to previous levels. To meet the rising

target of household welfare, they limited their fertility, boosting income and domestic labor inputs per child but also, importantly, keeping the demands of domestic labor within manageable limits.

Drawing attention to women's LFP as this study has done also helps interpret the diversity of local forms taken by the fertility decline. Recent scholarship suggests that, rather than having one overarching explanation, the fertility decline took a multiplicity of local shapes governed by varying factors (Simon Szreter 2011). In this interpretation, rising expectations made life harder for all mothers working in the labor market. Where it was most essential for mothers to have a job, as in Bradford, mothers were the most likely to want smaller families. It followed that in places, and in occupations dominated by men, where there were the most wives working in the labor market, the fastest decreases in fertility were observed. While Diana Gittins (1982) and Jutta Schwarzkopf (2004) have commented on this relationship, it is surprising that it has not had more attention from population historians.

## CONCLUSION

This discussion has shown that although recorded women's LFP changed by 20 percent or less between 1860 and 1920 in the places studied, it nonetheless played a central role in women's changing experiences of family life. There were different patterns of women's LFP between Bradford, Leeds, and Middlesbrough. Participation rates of those over age 20 reached 50 percent in Bradford, mostly in wool textiles, under 40 percent in Leeds, in more diverse trades but with tailoring becoming prominent, and was less than 20 percent in Middlesbrough. These differences were the key reason for variation in overall fertility and its two main components, age at marriage and marital fertility. Where women engaged in paid

work most, they were most likely to limit family size. It appears, too, that in a town dominated by a single occupation, characteristics of the culture associated with it might affect the town as a whole. In Bradford, Nellie Whiteley, with whom this study began, was describing the population as a whole when she said “it wasn’t that they didn’t want any children [in the 1920s], they wanted children but they only wanted one or two, maybe three, but they didn’t want great big families” (BHRU 1984: records A0067, 56). Furthermore, although fertility decline was the norm in England after the 1870s, it was differences in women’s LFP more than anything else which produced the precocious rapid decline in Bradford and its delayed, much slower manifestation in Middlesbrough. This relationship of women’s LFP and fertility will have been replicated in other locations.

In conclusion, evidence about people’s perceptions, beliefs, and behaviors provides the most reliable guide to the relationships between women’s LFP and fertility. This study has illustrated some ways in which such historicist evidence supports a stronger, more detailed, and more persuasive account of events than a more purely materialist one resting on demographic evidence alone. Newspaper reports and oral history show, for example, that women in Middlesbrough saw their options as domestic service, homemaking, or migration. This helps explain why early marriage and high fertility were more likely there than in Leeds or Bradford.

The examination of the nineteenth-century working-class cultures described here has shown the varying pressures on mothers working in the labor market. Their varying responses have been described: late marriage, exceptionally high full-time employment, and very low fertility in Bradford; and in Middlesbrough, marriage two or three years earlier, only half as much paid work, and fertility rates that were 60 percent higher than Bradford’s by 1911. It is by better understanding the details of such cultures that the complex map of women’s employment and fertility behavior can best be read.



*Paul Atkinson*  
*University of Huddersfield*  
*School of Music, Humanities and Media*  
*Room WG/23*  
*Queensgate, Huddersfield, HD1 3DH, United Kingdom*  
*Address for proofs:*  
*e-mail: [p.d.atkinson@hud.ac.uk](mailto:p.d.atkinson@hud.ac.uk)*  
*Office: +44 1484 478411*  
*Home: +44 1943 607526*  
*Cell: +44 7968 900517*

## BIOGRAPHY

Paul Atkinson is Post-Doctoral Research Assistant in the Department of History at the University of Huddersfield. After a twenty-year career in England's Department of Health and the European Commission's public health unit, Paul Atkinson earned a PhD in history at the University of Leeds in 2010. He now works on nineteenth-century English social history.

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## TABLES

*Table 1* Rates of women's labor force participation (LFP) as recorded by the census (percent), 1861–1911

	1861	1871	1901	1911
Bradford	50	49	38	40
Leeds	37	37	30	34
Middlesbrough		16	16	19

*Notes:* This table shows the percentage of women age 20 and older having a recorded census occupation. Data were not reported on a comparable basis for 1881 or 1891, and were not reported at all for Middlesbrough in 1861 because it was not then one of the large towns included in this report.

*Sources:* Census of England and Wales (1861, 1871); Census Returns of England and Wales (1901, 1911)

*Table 2* Share of total employment of women in different occupations (percent), 1871 and 1911

	Bradford		Leeds		Middlesbrough	
	1871	1911	1871	1911	1871	1911
Textiles	58	56	29	15		
Dress	13	7	19	34	32	14
Food and lodging	6	8	5	10	18	17
Service	17	8	33	21	35	38

*Notes:* Only the larger occupational groups are shown. Data describe only persons aged 20 and over.

*Sources:* Rimmer (1968: Table 3); Census of England and Wales (1871); Census Returns of England and Wales (1911)

*Table 3* Child-to-woman ratios, 1861–1911

	1861	1871	1881	1891	1901	1911
Bradford	0.514	0.527	0.522	0.408	0.348	0.299
Leeds	0.526	0.554	0.555	0.463	0.411	0.358
Middlesbrough			0.765	0.666	0.586	0.566

*Notes:* ratio of children under age 5 to women aged 15 – 44.

*Sources:* Calculated from data in the census reports (Census of England and Wales 1861, 1871, 1881, 1891; Census Returns of England and Wales 1901, 1911). 1861 and 1871 data are missing for Middlesbrough because the town only became a registration district in 1875.

*Table 4* Mean age at marriage (in years), 1881–1921

	1881	1921
Bradford	25.9	26.5
Leeds	25.0	26.6
Middlesbrough	22.9	24.3

*Sources:* Calculated from census data (Schürer and Woollard 2002; Census of England and Wales 1921)

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## NOTES

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<sup>1</sup> While the geographical definitions of Bradford, Leeds, and Middlesbrough used here are not strictly comparable between 1881 and other years, the resulting errors are small. Details are discussed in Atkinson (2010).